UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,905	10/10/2000	Yunzhou Li	10360/075001/12335BA	4628

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STEUBING AND MCGUINESS & MANARAS LLP 125 NAGOG PARK ACTON, MA 01720	

EXAMINER
LEZAK, ARRIENNE M

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-36_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-36_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____ .
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____ .
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19

November 2004 has been entered. Additionally, Examiner notes that Claims 1-3, 8-10,

15, 18-20 & 34 have been amended, and no Claims have been added or cancelled. All

Claims not explicitly addressed herein are found to be addressed within prior Office

Action dated 29 July 2004 as reiterated herein below.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 1, 3, 8, 10, 15, 19 & 20 are rejected under 35 U.S.C. 112, first paragraph,

as failing to comply with the enablement requirement. The claim(s) contains subject

matter, which was not described in the specification in such a way as to enable one

skilled in the art to which it pertains, or with which it is most nearly connected, to make

and/or use the invention. Particularly, Examiner notes that Applicant's claim language

includes "flooding the multicast data from a plurality of ports of the router", which

"flooding...from" is not supported or described anywhere with Applicant's specification.

Thus, as the specification is silent as to a definition for "flooding...from", Examiner

interprets the same to be the convention definition of "reading...from".

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter, which the applicant regards as his invention.

5.   Claims 1, 3, 8, 10, 15, 19 & 20 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention. Particularly, Examiner notes

that Applicant's claim language includes "flooding the multicast data from a plurality of

ports of the router", which "flooding...from" is not supported or described anywhere with

Applicant's specification. Thus, as the specification is silent as to a definition for

"flooding...from", Examiner interprets the same to be the convention definition of

"reading...from".

DETAILED ACTION

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a
> foreign country or in public use or on sale in this country, more than one year
> prior to the date of application for patent in the United States.

7.   Claims 1-36 rejected under 35 U.S.C. 102(b) as being anticipated by US Patent

5,903,559 to Acharya.

8.   Regarding Amended Claims 1, 8 & 15, and Original Claims 16, 17, 21 & 25,

Acharya discloses a method, a machine-readable medium and a router for processing

multicast data associated with a multicast group and transmitted to a port of a line card,

(per pending Claims 16, 17, 21 & 25), of a router, comprising the sequential steps of:

- reading the multicast data from a plurality of ports of the router; and

- determining an appropriate group of output ports for the multicast

  group,

(Fig. 8; Col. 7, lines 16-41; Col. 8, lines 51-67; Col. 9, lines 1-8; Col. 12, lines 43-67;

Col. 13; Col. 14, lines 46-67; Col. 15, lines 1-29; and Col. 16, lines 21-27). Examiner

specifically notes that reading data within Acharya is inherent to determining the

appropriate group of output ports, as a determination cannot be made on anything

without having read it first.

9.   Regarding Amended Claims 2, 9 & 18 and Original Claim 23, Acharya discloses

a method for transmitting subsequent multcast data associated with the multicast group

via only ports determined to be appropriate for the multicast group, (per pending Claims

2, 9 & 18), (Fig. 8; Col. 7, lines 16-41; Col. 12, lines 43-67; Col. 13; Col. 14, lines 46-67;

& Col. 15, lines 1-29), and wherein state information includes the source parameter

indicating a source of the data, (per pending Claim 23), (Col. 10, lines 42-49 and Col.

14, lines 39-45).

10.   Regarding Amended Claims 3, 10, 19 and Original Claim 24, Acharya discloses

a method wherein the state information includes a group parameter indicating at least

one destination of the data, (Col. 10, lines 42-49; Col. 14, lines 39-45; and Col. 18, lines

55-58), (per pending Claim 24), and wherein the reading of multicast data includes

transmitting the multicast data via all ports except the port on which the multicast data

was received, (per pending Claims 3, 10 & 19), (Fig. 8; Col. 7, lines 16-41; Col. 12, lines

43-67; Col. 13; Col. 14, lines 46-67; & Col. 15, lines 1-29).

11.   Regarding Claims 4 and 11, Acharya discloses a method comprising performing

a reverse path forwarding check on the data, (Col. 16, lines 8-27 and Col. 24, lines 43-

58).

12.   Regarding Claims 5, 7, 12 and 14, Acharya discloses a method wherein

performing and verifying is done using a multicast border gateway protocol, (Col. 24,

lines 43-58).

13.   Regarding Claims 6, 13 and 31, Acharya discloses a method comprising verifying

that the data, including known state information, was received at the proper line card,

(Col. 18, lines 42-67 and Col. 19, lines 1-19).

14.   Regarding Amended Claim 20 and Original Claims 22 & 30, Acharya discloses a

method for processing multicast data which is associated with a multicast group and

transmitted to a port of a line card of a router comprising: receiving multicast data

including known and unknown state information, (Fig. 8; Col. 14, lines 46-67 and Col.

15, lines 1-29); storing the multicast data with default state information, (Col. 7, lines 16-

41 and Col. 16, lines 21-27); reading the multicast data from a plurality of ports of the

router, (Fig. 8; Col. 7, lines 16-41; Col. 12, lines 43-67; Col. 13; Col. 14, lines 46-67; &

Col. 15, lines 1-29); performing a reverse path forwarding check on the multicast data,

(Col. 16, lines 8-27 and Col. 24, lines 43-58); verifying that the multicast data was

received at a proper interface, (Col. 18, lines 42-67 and Col. 19, lines 1-19); determining

a multicast group associated with the multicast data; and routing or multicasting the

multicast data to the multicast group or all available interfaces, (Col. 22, lines 26-67);

and routing the subsequent multicast data associated with the multicast group from only

the ports associated with the multicast group, (Fig. 8; Col. 7, lines 16-41; Col. 12, lines

43-67; Col. 13; Col. 14, lines 46-67; & Col. 15, lines 1-29).

15.   Regarding Claims 32 and 33, Acharya discloses multicasting data including

known state information according to the known state information if the multicast data

including known state information is verified, (pending Claim 32), and dropping the

multicast data including known state information if the multicast data including known

state information is not verified, (pending Claim 33), (Col. 14, lines 46-67 and Col. 15,

lines 1-29).

16.   Regarding Claim 26, Acharya discloses a method wherein a data path

associated with a router and configured to process multicast data executes the

performing and verifying, (Col. 8, lines 52 –61; Col. 10, lines 42-49; Col. 22, lines 58-67;

and Col. 23, lines 36-51).

17.   Regarding Claim 27, Acharya discloses a method wherein the data path uses a

multicast border gateway protocol in executing the performing and the verifying, (Col.

24, lines 43-59).

18.   Regarding Claim 28, Acharya discloses a method wherein the processor

included in a router and configured to process multicast data executes the determining,

(Fig.11 and Col. 19, lines 20-26).

19.   Regarding Claim 29, Acharya discloses a method comprising trimming routes to

paths not associated with multicast groups, (Col. 14, lines 46-67 and Col. 15, lines 1-

29).

20.   Regarding Amended Claim 34, Acharya discloses a method for processing

multicast data which is associated with a multicast group and transmitted to a port of a

line card of a router, (Fig. 8; Col. 7, lines 16-41; Col. 12, lines 43-67; Col. 13; Col. 14,

lines 46-67; & Col. 15, lines 1-29), comprising: installing a default state associated with

multicast data in a data path of a line card, (Col. 14, lines 46-67 and Col. 15, lines 1-29);

broadcasting the multicast data from the line card to all other line cards that the line

card is configured to communicate with, (Col. 22, lines 26-67); sending the multicast

data from the data path to a control path of the line card, (Col. 22, lines 58-67); at the

control path, computing a route for the multicast data, (Col. 23, lines 20-35); and

designating that the line cards not included in the computed route not broadcast

multicast data having the same state information and subsequently received at the data

path, (Col. 14, lines 46-67 and Col. 15, lines 1-29).

21.   Regarding Claim 35, Acharya discloses a method comprising performing at the

data path a reverse path forwarding check on the multicast data using a multicast

gateway border protocol, (Col. 16, lines 8-27 and Col. 24, lines 43-58).

22.   Regarding Claim 36, Acharya discloses a method comprising prior to the

installing, checking state information associated with the multicast data with a multicast

border gateway protocol to verify that the line card received the multicast data from a

proper source, (Col. 18, lines 42-67; Col. 19, lines 1-19; Col. 22, lines 26-67; and Col.

24, lines 43-58).

23.   Therefore, this reference may reasonably be read to teach or describe every

element or claim limitation of Claims 1-36.

Response to Arguments

24.   Applicant's arguments filed 19 November 2004, have been fully considered but

they are not persuasive. Applicant's arguments do not comply with 37 CFR 1.111(c)

because they do not clearly point out the patentable novelty which he or she thinks the

claims present in view of the state of the art disclosed by the references cited or the

objections made. Further, they do not show how the amendments avoid such

references or objections.

25.   For convenience, Examiner incorporates previous argument between the parties

as follows:

Examiner notes that Applicant's claims have been written so broadly that any

arbitrary state information, including that enumerated within Acharya, may be made to

read upon them. In particular, as to Applicant's argument regarding the storage of state

information, Examiner notes that Acharya teaches the storage of cells in a buffer, which

cells inherently comprise state information, (Col. 7, line 38). As to Applicant's argument

concerning the line card and controller, Examiner notes that Acharya teaches a line

interface card wherein the ATM is switched dynamically, and therefore are inherently

dynamically configuring said line cards, (in fact, said line cards are being configured

specifically to exclude the multicast data on specific computed route(s)), (Col. 7, lines

37-51). As to Applicant's argument concerning the receipt of multicast data including

unknown state information, Examiner observes that Acharya transmits information that

is unknown to a second router from a first router, (Col. 15, line 14 – note: 1-2 bcast

bitmap created by first router is unknown by second router).

26.   Additionally, Examiner notes that the Claims, as amended, do not recite

patentable subject matter, as noted herein above. Thus, as Examiner has completely

addressed Applicant's amendment, and finding Applicant's arguments do not show how

the amended claims language avoids such references or objections, Examiner hereby

maintains the rejection of all claims in their entirety.
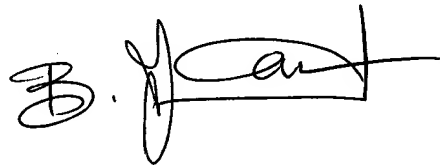

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Arrienne M. Lezak whose telephone number is (571)-

272-3916. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on (571)-272-3923. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free).

Arrienne M. Lezak
Examiner
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PRIMARY EXAMINER